

Application No. 10/759,471
Response dated June 10, 2005
Response to Office action mailed March 22, 2005

Amendments to the Claims.

In response to the request for restriction requirement, claims 24 and 25 are withdrawn.

The remaining claims (1-23) remain in the case.

Listing of Claims.

This following listing of claims replaces all prior versions, and listings, of claims in the application.

1 (original). An applicator apparatus for applying a protective cover to a product comprising:

- (a) a platform supporting the product in a predetermined orientation;
- (b) a cover magazine holding a plurality of protective covers;
- (c) a frame supporting a cover manipulator, the cover manipulator including a cover gripper operable to grasp a cover and extract said cover from the magazine and to position said cover for application to said product;
- (d) a transport mechanism coupled to said frame and operable to move said cover manipulator from a first position adjacent said cover magazine to a second position adjacent said platform;
- (e) a cover applicator for pressing said cover against said product in a predetermined orientation; and
- (f) a cover fastener for securing said cover to said product.

2 (original). The applicator of claim 1 wherein said platform includes a turntable mechanism for rotating said product to permit said protective covers to be applied to at least two sides thereof.

3 (original). The applicator of claim 1 wherein said cover manipulator comprises a structure rotatable about a pivot axis and said cover gripper comprises a plurality of suction cups mounted on said structure.

4 (original). The applicator of claim 3 wherein said structure is supported on a vertically movable positioner mechanism.

5 (original). The applicator of claim 4 wherein said vertically movable positioner mechanism is rotatable about a vertical axis.

6 (original). The applicator of claim 2 wherein said turntable is vertically moveable.

7 (original). The applicator of claim 6 further including a sensor system for sensing the height of said product and for adjusting the height of said turntable.

8 (original). The applicator apparatus of claim 1 wherein said protective cover is configured to cover an end of said product, a portion of each side adjacent said end and a portion of a top adjacent said end.

9 (original). The applicator apparatus of claim 8 wherein said cover fastener includes a pressure applicator operable to fold said protective cover along relieved portions formed therein over said sides and said top of said product and to apply fasteners thereto.

10 (original). The applicator apparatus of claim 9 wherein said pressure applicator comprises a set of pressure rollers.

11 (original). The applicator apparatus of claim 10 wherein said pressure applicator comprises a moveable cage.

12 (original). An applicator apparatus for applying a protective cover to a product comprising:

- (a) a platform supporting the product in a predetermined orientation and at a predetermined height;
- (b) a cover magazine holding a plurality of protective covers;
- (c) a frame supporting a cover manipulator, the cover manipulator including a moveable structure operable to grasp a cover and extract said cover from the magazine and to place said cover into an orientation for application to said product;

- (d) a transport mechanism coupled to said frame and operable to move said cover manipulator from a first position adjacent said cover magazine to a second position adjacent said platform;
- (e) an applicator and fastener assembly for pressing said cover against said product in a predetermined orientation and for securing said cover to said product.

13 (original). The applicator apparatus of claim 12 wherein said moveable structure comprises at least one articulated member rotatable about a pivot axis and supported on a vertically moveable positioner.

14 (original). The applicator apparatus of claim 13 wherein said articulated member comprises at least one arm member supporting a plurality of suction members for gripping a protective cover.

15 (original). The applicator apparatus of claim 13 wherein said articulated member comprises a plate member supporting a plurality of suction members for gripping a protective cover.

16 (original). The applicator of claim 12 wherein said platform includes a turntable mechanism for rotating said product to permit said protective covers to be applied to at least two sides thereof.

17 (original). The applicator of claim 16 wherein said turntable is vertically moveable.

18 (original). The applicator of claim 17 further including a sensor system for sensing the height of said product and for adjusting the height of said turntable.

19 (original). The applicator apparatus of claim 12 wherein said protective cover is configured to cover an end of said product, a portion of each side adjacent said end and a portion of a top adjacent said end.

20 (original). The applicator apparatus of claim 19 wherein said cover fastener includes

a pressure applicator operable to fold said protective cover along relieved portions formed therein over said sides and said top of said product and to apply fasteners thereto.

21 (original). The applicator apparatus of claim 9 wherein said pressure applicator comprises a set of pressure rollers.

22 (original). The applicator apparatus of claim 10 wherein said pressure applicator comprises a moveable cage aligned with said end of said product and operable to press side and top portions of said protective cover around said product.

23 (original). The applicator apparatus of any of claims 1-22 wherein said protective cover comprises a planar sheet of material having relieved side and top portions so as to permit said portions to be folded over the top and sides of said product.

24 (withdrawn). A method for protecting end portions of a product comprising the steps of:

- (a) forming a sheet of protective material configured and dimensioned to cover ends and portions of a top and sides of said product;
- (b) gripping said sheet and placing it against said end portion of said product;
- (c) folding said sheet along relieved portions formed therein over said portions of said top and sides of said product;
- (d) fastening said sheet to said product.

25 (withdrawn). The method of claim 24 wherein steps (b), (c) and (d) are performed by an apparatus comprising:

- (a) a platform supporting the product in a predetermined orientation and at a predetermined height;
- (b) a magazine holding a plurality of said sheets;

- (c) a frame supporting a manipulator, the manipulator including a moveable structure operable to grasp a sheet and extract said sheet from the magazine and to place said sheet into an orientation for application to said product;
- (d) a transport mechanism coupled to said frame and operable to move said manipulator from a first position adjacent said magazine to a second position adjacent said platform; and
- (e) a folder and fastener assembly.